



Water Resources ♦ Flood Control ♦ Water Rights

JOSEPH D. COUNTRYMAN, P.E.
GILBERT COSIO, JR., P.E.
MARC VAN CAMP, P.E.
WALTER BOUREZ, III, P.E.
RIC REINHARDT, P.E.
GARY KIENLEN, P.E.
DON TRIEL, P.E.

ANGUS NORMAN MURRAY
1913-1985

CONSULTANTS:
JOSEPH I. BURNS, P.E.
DONALD E. KIENLEN, P.E.

April 8, 2011

Terry Macaulay
Deputy Executive Officer
Delta Stewardship Council
980 Ninth Street, Suite 1500
Sacramento, CA 95814

**Subject: Second Draft Delta Plan
Comments Concerning Table 9-3**

Dear Ms. Macaulay:

I am finally trudging my way through the second draft of the Delta Plan. My overall comments will be presented through the California Central Valley Flood Control Association. However, right now I would like to comment specifically on Table 9-3, Delta Flood Control Expenditures. This table alarms me because it uses 1,115 miles of levee in need of repair to meet HMP and PL-99 standards. This is incorrect because it appears to include all project levees, levees in the Yolo Bypass, flooded island levees, restricted height levees, dry levees, and other levees that in no way will ever need any funding to meet HMP or PL-99. I would have hoped that someone on your staff or consultant team would know enough to figure this out. I will try to describe, below, an approximate estimate of how many levee miles may need funding to meet the HMP and PL-99 standards.

Enclosed is the CALFED quantity and cost estimate we compiled, along with Kjeldsen, Sinnock, and Neudeck, as subconsultants to a CALFED consultant in 1999. We worked hard to try and document all levees in the Delta, including levees that would not ever experience levee rehabilitation.

The project levee miles should be eliminated from your table simply because essentially all project levees exceed the PL-99 minimum requirements. That would leave 635.2 non-project levee miles (see enclosed table). Without a whole lot of investigation, I would eliminate the following non-project levee miles for the reasons shown below:

Bishop Tract	5.8 miles	Exceeds FEMA standard
Byron Tract	9.7 miles	Exceeds PL-99
Ehrheart Club	6.0 miles	Geometrically exceeds FEMA standard
Glide District	4.0 miles	Dry levee, no plans for improvement
Holland Land	5.8 miles	Mistake in table, should be project levee

Liberty Island	20.5 miles	Yolo Bypass restricted height, flooded
Lincoln Village West	4.0 miles	Exceeds PL-99 standard
Lisbon District	5.2 miles	Dry levee, no plans for improvement
Little Egbert Tract	7.0 miles	Yolo Bypass restricted height
Little Mandeville	4.5 miles	Currently flooded, no plans to reclaim
McCormack-Williamson	8.8 miles	Restricted height
Mildred Island	7.3 miles	Currently flooded, no plans to reclaim
Pearson District	7.0 miles	Exceeds PL-99 standard
Prospect Island	7.1 miles	Yolo Bypass restricted height
Rough & Ready Island	6.7 miles	Exceeds PL-99 standard
Sargent Barnhart	2.8 miles	Exceeds PL-99 standard
Smith Tract	2.8 miles	Exceeds PL-99 standard
Stark Tract	0.7 miles	Exceeds PL-99 standard
Union Island, East	13.0 miles	Exceeds PL-99 standard
Weber Tract	1.2 miles	Exceeds PL-99 standard
West Sacramento	<u>1.3 miles</u>	Dry levee, no plans for improvement
TOTAL		131.2 miles

If the above 131.2 miles are eliminated from the 635.2 miles of non-project levee, the total miles to rehabilitate would be reduced to 504 miles, thus immediately reducing your cost estimates by 55%.

I know the Draft Delta Plan lists the Delta Vision Strategic Plan as the source of this table. As I have stated before the Delta Stewardship Council, there is a lot of published information that is incorrect. This is a prime example. If you have any questions, or would like additional information, please call me at (916) 456-4400.

Sincerely,
MBK ENGINEERS


Gilbert Cosio, Jr.

Sacramento-San Joaquin Delta, California

Levee Rehabilitation Study

District Number	Reclamation District	Levee Miles			Total Fill Volume (yd ³)	Estimated PL-99 Improvement Cost	
		Project	Non-Project	Total		Low	High
556	1 Andrus Island, Upper	11.2	0.6	11.8	30,000	\$517,290	\$1,408,450
2126	1 Atlas Tract	0.0	1.9	1.9	57,000	\$927,394	\$2,631,111
2028	Bacon Island	0.0	14.3	14.3	1,420,443	\$20,712,541	\$60,697,769
	2 Bear Creek	46.5	0.0	46.5	0	\$0	\$0
	2 Bethany			0.0	0	\$0	\$0
	Bethel Island MID	0.0	11.5	11.5	230,634	\$4,188,633	\$11,473,059
2042	2 Bishop Tract	0.0	5.8	5.8	0	\$0	\$0
	2 Bishop Tract, East			0.0	0	\$0	\$0
2121	2 Bixler	0.0	2.3	2.3	0	\$0	\$0
404	2 Boggs (Moss) Tract	4.0	1.2	5.2	0	\$0	\$0
	2 Borrow Pond Area			0.0	0	\$0	\$0
756	Bouldin Island	0.0	18.0	18.0	2,454,122	\$33,917,002	\$101,465,550
2033	Brack Tract	0.0	10.8	10.8	246,291	\$4,162,288	\$11,645,933
2059	Bradford Island	0.0	7.4	7.4	797,028	\$11,222,624	\$33,430,057
317, 407 & 2067	Brannan-Andrus LMD	19.3	10.1	29.4	1,260,711	\$19,147,841	\$54,942,188
800	2 Browns Island			0.0	0	\$0	\$0
	2 Byron Tract	0.0	9.7	9.7	0	\$0	\$0
2098	2 Cache Haas	12.1	0.0	12.1	0	\$0	\$0
2086	Canal Ranch	0.0	7.5	7.5	511,350	\$7,374,253	\$21,731,317
	2 Chipps Island			0.0	0	\$0	\$0
	2 Clifton Court			0.0	0	\$0	\$0
	2 Collinsville			0.0	0	\$0	\$0
2117	Coney Island	0.0	5.4	5.4	37,477	\$1,004,522	\$2,428,368
2111	1 Dead Horse Island	0.0	2.6	2.6	13,258	\$384,338	\$915,177
	2 Decker			0.0	0	\$0	\$0
	2 Delta-Mendota			0.0	0	\$0	\$0
	1 Drexler Island	0.0	4.0	4.0	20,000	\$614,178	\$1,495,435
536	2 Egbert Tract	14.0	0.0	14.0	0	\$0	\$0
813	2 Ehrheart	2.0	6.0	8.0	0	\$0	\$0
2029	Empire Tract	0.0	10.5	10.5	1,093,053	\$15,737,352	\$46,227,173
773	1 Fabian Tract	0.0	18.8	18.8	188,000	\$4,541,103	\$11,439,905
2113	1 Fay Island	0.0	1.6	1.6	8,026	\$240,435	\$569,585
1002	1 Glanville Tract	0.0	13.0	13.0	65,099	\$2,335,317	\$5,292,676
765	2 Glide	1.7	4.0	5.7	0	\$0	\$0
3	2 Grand Island	29.0	0.0	29.0	0	\$0	\$0
1609	2 Harveys			0.0	0	\$0	\$0
2060	2 Hastings Tract	16.0	0.0	16.0	0	\$0	\$0
999	2 Holland Land	27.0	5.8	32.8	0	\$0	\$0
2025	Holland Tract	0.0	10.9	10.9	182,612	\$3,816,975	\$9,912,258
2116	2 Holt Station	0.0	0.4	0.4	0	\$0	\$0
799	1 Hotchkiss Tract	0.0	6.3	6.3	121,248	\$2,371,992	\$6,406,959
830	1 Jersey Island	0.0	15.6	15.6	468,000	\$7,527,319	\$21,485,215
2038	Jones Tract, Lower	0.0	8.8	8.8	644,924	\$10,512,293	\$29,344,095
2039	Jones Tract, Upper	0.0	9.3	9.3	98,661	\$1,957,521	\$5,124,811
2085	2 Kasson	6.2		6.2	0	\$0	\$0
	2 Kimball Island			0.0	0	\$0	\$0
2044	King Island	0.0	9.0	9.0	276,103	\$4,483,102	\$12,688,246
369	1 Libby McNeil	1.0	0.7	1.7	66,000	\$981,195	\$2,864,665
2093	2 Liberty Island	0.0	20.5	20.5	0	\$0	\$0
1608	2 Lincoln Village West	0.0	4.0	4.0	0	\$0	\$0
307	2 Lisbon	7.8	5.2	13.0	0	\$0	\$0
2084	2 Little Egbert Tract	0.0	7.0	7.0	0	\$0	\$0
	2 Little Franks Tract			0.0	0	\$0	\$0
2118	1 Little Mandeville	0.0	4.5	4.5	450,000	\$6,348,833	\$18,876,664
	2 Los Medanos			0.0	0	\$0	\$0
	2 Maintenance Area 9	19.6	0.0	19.6	0	\$0	\$0
2027	Mandeville Island	0.0	14.3	14.3	502,358	\$7,789,541	\$22,407,366
2110	1 McCormack-Williamson Tract	0.0	8.8	8.8	525,000	\$7,696,924	\$22,600,613
2030	McDonald Island	0.0	13.7	13.7	98,170	\$2,482,325	\$6,316,103
2075	2 McMullin	7.4	0.0	7.4	0	\$0	\$0
2041	Medford Island	0.0	5.9	5.9	453,667	\$6,494,287	\$19,197,006
150	2 Merritt Island	18.1	0.0	18.1	0	\$0	\$0
2021	2 Mildred Island	0.0	7.3	7.3	0	\$0	\$0
	2 Montezuma Flats			0.0	0	\$0	\$0
	2 Montezuma Island			0.0	0	\$0	\$0
2107	2 Mossdale 2	4.2	0.0	4.2	0	\$0	\$0
17	2 Mossdale Tract	14.0	0.0	14.0	0	\$0	\$0
1007	1 Naglee Burke Tract	0.0	8.3	8.3	83,000	\$1,813,377	\$4,762,587
348	New Hope Tract	0.0	18.6	18.6	291,322	\$4,928,678	\$13,860,672
	2 Oakley			0.0	0	\$0	\$0
2024	Orwood Tract	0.0	10.9	10.9	12,211	\$724,248	\$1,623,068

Sacramento-San Joaquin Delta, California

Levee Rehabilitation Study

District Number	Reclamation District	Levee Miles			Total Fill Volume (yd ³)	Estimated PL-99 Improvement Cost	
		Project	Non-Project	Total		Low	High
2036	Palm Tract	0.0	7.5	7.5	181,136	\$3,057,990	\$8,607,846
2095	2 Paradise	4.0	0.0	4.0	0	\$0	\$0
2058	1 Pescadero Tract	6.7	2.2	8.9	43,340	\$1,325,842	\$3,248,954
2104	2 Peters	7.4	0.0	7.4	0	\$0	\$0
551	2 Pierson District	8.4	7.0	15.4	0	\$0	\$0
1667	2 Prospect Island	2.9	7.1	10.0	0	\$0	\$0
2090	Quimby Island	0.0	7.0	7.0	426,462	\$6,244,751	\$18,343,567
755	2 Randall	1.9	0.0	1.9	0	\$0	\$0
2037	Rindge Tract	0.0	15.7	15.7	520,276	\$8,310,102	\$23,847,863
2114	2 Rio Blanco Tract	0.0	4.0	4.0	0	\$0	\$0
2064	2 River Junction	11.6	0.0	11.6	0	\$0	\$0
524	1 Robert Island, Middle	6.1	3.7	9.8	63,447	\$1,932,828	\$4,741,046
684	Roberts Island, Lower	0.0	16.0	16.0	141,273	\$3,703,092	\$9,065,832
544	1 Roberts Island, Upper	10.6	4.4	15.0	88,068	\$2,678,112	\$6,574,274
	2 Rough and Ready Island	0.0	6.7	6.7	0	\$0	\$0
501	2 Ryer Island	20.6	0.0	20.6	0	\$0	\$0
	2 Sacramento Deepwater			0.0	0	\$0	\$0
2074	2 Sargent Barnhart Tract	1.5	2.8	4.3	0	\$0	\$0
341	Sherman Island	9.7	9.8	19.5	321,559	\$5,778,494	\$15,639,373
	2 Sherman Island, West			0.0	0	\$0	\$0
2115	Shima Tract	0.0	6.6	6.6	41,563	\$1,142,313	\$2,853,331
	1 Shin Kee Tract	0.0	3.9	3.9	360,000	\$5,079,744	\$15,099,311
	2 SJCFCD Five Mile Slough			0.0	0	\$0	\$0
	2 SJCFCD Fourteen Mile Slough			0.0	0	\$0	\$0
	2 SJCFCD Mosher Slough			0.0	0	\$0	\$0
1614	2 Smith Tract	6.0	2.8	8.8	0	\$0	\$0
	2 Spinner Island			0.0	0	\$0	\$0
2089	2 Stark	2.9	0.7	3.6	0	\$0	\$0
38	Staten Island	0.0	25.4	25.4	921,949	\$14,349,298	\$41,373,293
2062	2 Stewart Tract	12.3	0.0	12.3	0	\$0	\$0
349	2 Sutter Island	12.5	0.0	12.5	0	\$0	\$0
548	1 Terminus Tract	0.0	16.1	16.1	1,262,330	\$18,495,932	\$54,337,453
2108	2 Tinsley			0.0	0	\$0	\$0
1601	Twitchell Island	2.5	9.3	11.8	1,291,084	\$18,588,176	\$54,670,526
563	Tyler Island	12.2	10.7	22.9	2,863,563	\$41,800,546	\$121,994,769
1	Union Island, East	1.0	13.0	14.0	0	\$0	\$0
2	1 Union Island, West	0.0	16.2	16.2	80,492	\$2,611,017	\$6,240,156
1607	1 Van Sickle Island	0.0	3.8	3.8	380,000	\$5,357,353	\$15,925,323
2065	Veale Tract	0.0	5.7	5.7	21,243	\$718,854	\$1,721,402
2023	1 Venice Island	0.0	12.3	12.3	123,977	\$2,668,367	\$7,001,564
2040	1 Victoria Island	0.0	15.1	15.1	150,775	\$3,316,281	\$8,735,545
554	2 Walnut Grove	1.0	1.2	2.2	0	\$0	\$0
2094	2 Walthall	3.3	0.0	3.3	0	\$0	\$0
2026	Webb Tract	0.0	12.8	12.8	606,166	\$9,042,328	\$26,322,968
828	2 Weber	0.0	1.2	1.2	0	\$0	\$0
	2 West Island			0.0	0	\$0	\$0
900	2 West Sacramento	12.0	1.3	13.3	0	\$0	\$0
2096	2 Wetherbee	0.2	0.0	0.2	0	\$0	\$0
2122	1 Winter Island	0.0	4.8	4.8	480,000	\$6,765,248	\$20,115,682
2072	Woodward Island	0.0	8.8	8.8	338,105	\$5,237,691	\$15,118,990
2119	Wright-Elmwood Tract	0.0	6.8	6.8	82,516	\$1,957,902	\$4,914,584
2068	2 Yolano	8.7	0.0	8.7	0	\$0	\$0
	2 Yolo Bypass Unit 4	3.6	0.0	3.6	0	\$0	\$0
		430.6	635.2	1065.8	23,495,092	\$367,117,979	\$1,051,757,735

1 Extrapolated Values

2 Project Levee, Meets or Exceeds PL84-99 or Non-Levee

Districts	Levee Miles	
	Project	Non-Project
Detailed Quantity Estimates	32	44.7
Extrapolated Values	23	35.6
Project Levee, Meets or Exceeds PL84-99 or Non-Levee	69	350.3
	124	430.6
		635.2